



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/582,953	06/15/2006	Francois Baleras	292376US6PCT	9755
22850	7590	02/06/2009		
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314				
EXAMINER				
PATEL, ISHWARBHAI B				
ART UNIT		PAPER NUMBER		
2841				
NOTIFICATION DATE		DELIVERY MODE		
02/06/2009		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com

oblonpat@oblon.com

jgardner@oblon.com

### Office Action Summary

**Application No.**

10/582,953

**Applicant(s)**

BALERAS ET AL.

**Examiner**

Ishwar (I. B.) Patel

**Art Unit**

2841

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 November 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 29-56 is/are pending in the application.
- 4a) Of the above claim(s) 43-56 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 29-42 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 June 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/S508)
- Paper No(s)/Mail Date 9/14/06
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Election/Restrictions*

1. Applicant's election with traverse of group I, claims 29-42 in the reply filed on November 14, 2008 is acknowledged. The traversal is on the ground(s) that the restriction asserts that one common claimed feature is found in the prior art. However, such a finding does not establish that other common claimed technical features, or combination of claimed technical features, are also disclosed in the prior art. Thus, applicant cannot determine whether or not the group of claimed inventions are linked to form a single inventive concept with a special technical feature that defines the contribution which each claimed invention, *considered as a whole*, makes over the prior art. See MPEP 1893.03(d).

This is not found persuasive because a component mounted on a substrate is old and known in the art (also applicant admitted in the prior art). The applicant's invention is providing a notch to further improve the mounting. The prior art of Suehiro and Oomori, as explained by the previous examiner, including the various prior arts cited in the rejection, discloses such arrangement. Also, claims of group I are directed to a structure, whereas that of group II and III are directed to a process / method for making the structure.

The requirement is still deemed proper and is therefore made FINAL.

***Priority***

2. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been received and placed of record in the file.

***Drawings***

3. Figure 1A-1B should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 29-37, 41 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over the applicant's admitted prior art figure 1B (hereafter, Apa1b) in view

of Yamashita (Japanese Patent No. JP405145212A) and Takahisa (Japanese Patent No. JP411283859A).

Regarding claim 29, Apa1b a component to be mounted on a transfer surface, comprising: at least one layer defining a plane in which at least one transfer face of the component, not parallel to the plane (plane defining the layer of the element 13 and 14).

Apa1b does not disclose at least one metallized bonding land enabling assembly of the component by transfer and soldering of the metallized bonding lands onto the transfer surface, wherein the at least one metallized bonding land of the component is arranged in a recessed notch set back from the surface of the transfer face.

However, a component with metallized bonding land with a recessed notch set back from the surface of the transfer face, as disclosed by Takahisa in figure 1 and 3, and Yamashita, figure 5, is old and known in the art for the better and strong connection with the transfer surface (board).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of applicant's invention to provide the structure of Apa1b with at least one metallized bonding land enabling assembly of the component by transfer and soldering of the metallized bonding lands onto the transfer surface, wherein the at least one metallized bonding land of the component is arranged in a recessed notch set back from the surface of the transfer face, as taught by Sakurai and Yamashita, in order to have the better and strong connection with the transfer surface (board).

Regarding claims 30-37, 41 and 42, the modified structure of Apa1b (description of prior art figure) further discloses at least one active layer (claim 30); as the at least one active layer is an optically active layer (claim 31); a support platform forming a transfer surface and including metallized mounting lands corresponding to the metallized bonding lands of the component [(claim 32), (also, also, see Yamashita and Takahisa)]; the at least one metallized bonding land is arranged at a border of the transfer face of the component [(claim 33), (also, see Yamashita and Takahisa)]; the transfer face comprises at least two metallized lands arranged along two opposite edges of the transfer face [(claim 34, (also, see Yamashita and Takahisa)]; the transfer face comprises four metallized lands arranged at corners of the transfer face [(claim 35), obvious in view of Yamashita)]; plural faces of the component forming the transfer faces comprise metallized bonding lands [(claim 36), (also, see Yamashita and Takahisa)]; the at least one metallized bonding land is arranged on each transfer face and represents a major part of the surface area of the transfer face [(claim 37), (also, see Yamashita and Takahisa)]; plural layers of distinct media arranged parallel to the plane (claim 41) and an optical resonant cell for coherent light, two opposite side faces parallel to the plane comprising reflecting layers (claim 42).

6. Claims 38-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over the modified structure of Apa1b as applied to claim 29 above, and further in view of Huang (US Patent No. 6,521,997).

Regarding claims 38-40, the modified structure of Apa1b discloses all the features of the claimed limitations but does not disclose an intermediate element is placed between the transfer face of the component and the transfer surface, as recited in claim 38; the intermediate element is placed between the component and the transfer surface with a shim or positioning adjustment stop function, as recited in claim 39; and the intermediate element is a heat sink or a cooler, as recited in claim 40.

Huang discloses a structure with an intermediate element (16) placed between the transfer face of the component and the transfer surface. The intermediate element will help in transferring heat from the component as is in direct contact with the component surface and the board, as well as, help in additional strength in positioning the component.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of applicant's invention to provide the structure of modified Apa1b with the limitations as recited in claims 38-40, as taught by Huang, in order to better functioning of the device as quick removal of heat will improve the performance. Further, regarding claim 39, how the element function will not change the structure. As the modified Apa1b discloses the structure, it meets the limitation.

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Noboru (Japanese Patent No. JP411307691A) discloses recess in the side face of the component to increase the soldering strength (see abstract).

Oomori (US Patent Application Publication No. 2003/0081289) disclose a module with elements (24, 26) below the components controlling the temperature of the components.

Suehiro (US Patent No. 6,834,977) in figure discloses a component (light emitting device 1) with notches mounted on a board with land (22).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ishwar (I. B.) Patel whose telephone number is (571) 272 1933. The examiner can normally be reached on M-F (8:30 - 5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard can be reached on (571) 272 1984. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ibp  
February 2, 2009

/Ishwar (I. B.) Patel/  
Primary Examiner, Art Unit 2841